



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-1018; Project Identifier MCAI-2021-00902-R; Amendment 39-21934; AD 2022-03-17]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Helicopters Model AS332L2 and EC225LP helicopters. This AD was prompted by a report of loss of tightening torque on the nut that attaches the tail gear box (TGB) bevel wheel. This AD requires repetitive inspections (measurements) of the angular clearances of the TGB, and, depending on the findings, replacement of the TGB with a serviceable TGB, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. This AD also provides terminating action for certain repetitive inspections. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For EASA material incorporated by reference (IBR) in this final rule, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find the EASA material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this

material at the FAA, call (817) 222-5110. It is also available in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1018.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1018; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the EASA AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0184R1, dated October 8, 2021 (EASA AD 2021-0184R1), to correct an unsafe condition for Airbus Helicopters, formerly Eurocopter, Eurocopter France, Aerospatiale, Model AS 332 L2 and EC 225 LP helicopters, all serial numbers.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Helicopters Model AS332L2 and EC225LP helicopters. The NPRM published in the *Federal Register* on December 1, 2021 (86 FR 68166). The NPRM was prompted by a report of loss of tightening torque on the nut that attaches the TGB bevel wheel. Additionally, the subsequent investigation highlighted that loss of the tightening torque might lead to degradation of the splines between the tail rotor shaft and the TGB bevel wheel. The investigation is still on-going to identify the root cause of the tightening torque loss. The NPRM proposed to require repetitive inspections (measurements) of the angular clearances of the TGB, and,

depending on the findings, replacement of the TGB with a serviceable TGB, as specified in EASA AD 2021-0184R1.

After the FAA issued the NPRM, EASA issued EASA AD 2021-0184R2, dated January 12, 2022 (EASA AD 2021-0184R2), which revises EASA AD 2021-0184R1 to correct the allowable angular clearance range. EASA specifies that the angular clearance range specified in EASA AD 2021-0184R1 was defined stricter than the one defined in the service information. Therefore, EASA issued EASA AD 2021-0184R2 to correct the allowable clearance range accordingly.

The FAA is issuing this AD to address loss of tightening torque on the nut that attaches the TGB bevel wheel, which, if not corrected, could lead to structural failure of the TGB drive, resulting in reduced, or loss of, control of the helicopter. See EASA AD 2021-0184R2 for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes and updating EASA AD 2021-0184R2 as the material incorporated by reference, this AD is adopted as proposed in the NPRM. None of these changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

EASA AD 2021-0184R2 requires repetitive inspections (measurements) of the angular clearances of the TGB, and, depending on the findings, additional repetitive inspections (measurements) of the angular clearances of the TGB at a reduced interval and replacement of the TGB with a serviceable TGB. EASA AD 2021-0184R2 provides

terminating action for the repetitive inspections at the reduced interval for a helicopter if, during two consecutive inspections, the value of the measured angular clearance remains unchanged for that helicopter.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Interim Action

The FAA considers this AD to be an interim action. If final action is later identified, the FAA might consider further rulemaking then.

Differences Between this AD and the EASA AD

EASA AD 2021-0184R2 requires compliance in terms of flight hours, this AD requires using hours time-in-service. Where EASA AD 2021-0184R2 refers to August 19, 2021 (the effective date of EASA AD 2021-0184, dated August 5, 2021), this AD requires using the effective date of this AD. Where the service information referenced in EASA AD 2021-0184R2 specifies sending parts to the manufacturer or an approved repair station to be examined, this AD does not include that requirement.

Costs of Compliance

The FAA estimates that this AD affects 38 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Estimated Costs for Required Actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection of TGB Clearance	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$6,460 per inspection cycle

The FAA estimates the following costs to do any necessary on-condition actions that are required based on the results of any required actions. The FAA has no way of determining the number of helicopters that might need this on-condition action:

Estimated Costs of On-Condition Actions

Action	Labor cost	Parts cost	Cost per product
Replacement of TGB	33 work-hours X \$85 per hour = \$2,805	Up to \$410,000	Up to \$412,805

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-03-17 Airbus Helicopters: Amendment 39-21934; Docket No. FAA-2021-1018; Project Identifier MCAI-2021-00902-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Airbus Helicopters Model AS332L2 and EC225LP helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6400, Tail Rotor System.

(e) Unsafe Condition

This AD was prompted by a report of loss of tightening torque on the nut that attaches the tail gear box (TGB) bevel wheel. The FAA is issuing this AD to address loss of tightening torque on the nut that attaches the TGB bevel wheel, which, if not corrected, could lead to structural failure of the TGB drive, resulting in reduced, or loss of, control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions

and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2021-0184R2, dated January 12, 2022 (EASA AD 2021-0184R2).

(h) Exceptions to EASA AD 2021-0184R2

(1) Where EASA AD 2021-0184R2 requires compliance in terms of flight hours, this AD requires using hours time-in-service.

(2) Where EASA AD 2021-0184R2 refers to August 19, 2021 (the effective date of EASA AD 2021-0184, dated August 5, 2021), this AD requires using the effective date of this AD.

(3) Where the service information referenced in EASA AD 2021-0184R2 specifies sending parts to the manufacturer or an approved repair station to be examined, this AD does not include that requirement.

(4) This AD does not mandate compliance with the “Remarks” section of EASA AD 2021-0184R2.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2021-0184R2 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Special Flight Permit

Special flight permits may be permitted provided that there are no passengers on board.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021-0184R2, dated January 12, 2022.

(ii) [Reserved]

(3) For EASA AD 2021-0184R2, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find the EASA material on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. This material may be found in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1018.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on January 26, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-03137 Filed: 2/14/2022 8:45 am; Publication Date: 2/15/2022]